101.1 - Plain Carbon Steels (chip form)

These SRMs are for checking chemical methods of analysis. They consist of steel alloys selected to provide a wide range of analytical values for elements. They are furnished in 150-g units (unless otherwise noted) as chips usually sized between 0.4 mm to 1.2 mm, prepared from selected portions of commercial ingots.

Technical Contact: john.sieber@nist.gov

PLEASE NOTE: The tables are presented to facilitate comparisons among a family of materials to help customers select the best SRM for their needs. For specific values and uncertainties, the certificate is the only official source.

SRM	8k	12h	13g	14g	15h	16f
Description	Bessemer Steel (Simulated), 0.1 % Carbon	Basic Open-Hearth Steel, 0.4% Carbon	0.6% Carbon Steel	Carbon Steel (AISI 1078)	Basic Open-Hearth Steel, 0.1% Carbon	Basic Open-Hearth Steel, 1% carbon
Unit of Issue	(150 g)	(150 g)	(150 g)	(150 g)	(150 g)	(150 g)
Element Composition (mass fraction, in %)						
C	0.0806	0.407	0.613	0.735	0.076	0.97
Mn	0.5040	0.842	0.853	0.456	0.373	0.404
P	0.0956	0.018	0.006	0.006	0.005	0.014
S	0.0775	0.027	0.031	0.019	0.019	0.026
Si	0.0576	0.235	0.355	0.232	0.008	0.214
Ni	0.1174	0.032	0.061	0.030	0.017	0.008
Cu	0.0200	0.073	0.066	0.047	0.013	0.006
Cr	0.0467	0.074	0.050	0.081	0.018	0.020
V	0.0145	0.003	0.001	0.0008	>0.001	0.002
Mo	0.0397	0.006		0.011	0.009	0.003
Co						0.003
Sn						
Al (total)		(0.038)	0.048	0.025	0.061	
N		0.006				

Values in parentheses are not certified and are given for information only.

101.1 - Plain Carbon Steels (chip form)

These SRMs are for checking chemical methods of analysis. They consist of steel alloys selected to provide a wide range of analytical values for elements. They are furnished in 150-g units (unless otherwise noted) as chips usually sized between 0.4 mm to 1.2 mm, prepared from selected portions of commercial ingots.

Technical Contact: john.sieber@nist.gov

PLEASE NOTE: The tables are presented to facilitate comparisons among a family of materials to help customers select the best SRM for their needs. For specific values and uncertainties, the certificate is the only official source.

SRM	19h	20g	152a	178	368
Description	Basic Electric Steel, 0.2% Carbon	AISI 1045 Steel	Basic Open-Hearth Steel, 0.5% Carbon (Tin Bearing)	0.4C Basic Oxygen Furnace Steel	Carbon Steel (AISI 1211)
Unit of Issue	(150 g)	(150 g)	(150 g)	(150 g)	(150 g)
Element Composition (mass fraction, in %)					
C	0.215	0.462	0.486	0.395	0.089
Mn	0.393	0.665	0.717	0.824	0.82
P	0.016	0.012	0.012	0.012	0.084
S	0.022	0.028	0.030	0.014	0.132
Si	0.211	0.305	0.202	0.163	0.007
Ni	0.248	0.034	0.056	0.010	0.008
Cu	0.466	0.034	0.023	0.032	0.010
Cr	.0173	0.036	0.046	0.016	0.030
V	0.003	0.002	0.001	0.001	0.001
Mo	0.038	0.008	0.036	0.003	0.003
Co					
Sn			0.032		
Al (total)	0.002	0.040			
N					0.010

Values in parentheses are not certified and are given for information only.